

# ON THE IDENTITY AND NOMENCLATURE OF CERTAIN INDIAN *IXORA* (RUBIACEAE)<sup>1</sup>

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The revision of the genus *Ixora* L. (Rubiaceae) by Bremekamp (1937a) has been criticised by Corner (1941) in his study of the Malayan *Ixora*. Corner observed "the size and hairiness of corolla and even the shape of the petals I find to be most variable and, for the majority of the Malayan species, by no means specific. From the most recent works on the genus (Craib 1934, Bremekamp loc.cit.), the impression is gained that many new species can be blocked out from the old and that minute differences in hairiness, leaf size or shape and length of corolla tube suffice to define them. But I am certain that this view is mistaken, and if followed, must lead to the making of so many species that the classification of the genus will become impossible. Such splitting, based on relatively few herbarium specimens, merely obscures the issue which is to have names for the well defined groups of individuals".

*Ixora chinensis* Lam., *I. coccinea* L., *I. javanica* (Bl.) DC., *I. grandifolia* Zoll. & Mor., *I. nigricans* Wt. & Arn. etc. treated therein by Corner (loc.cit.) are very common and widespread in India. On the other hand, field studies conducted by the senior author (D.B.D.) of this note during the last three decades and that of the other author (R.C.R.) for the last four years support the observations of Corner. Again, specimens available in herbaria after the study by Bremekamp (loc. cit.) and Corner (loc.cit.) tend to bridge the gap in knowledge on variability of some species. Husain and Paul (1989) did not examine many specimens in CAL and K as there is no indication of their study on the herbarium specimens to which the authors of this note had access.

In the light of these facts we are in a position to comment on the status of several species thereby reducing them to synonyms. Those reduced to synonyms do not deserve infraspecific status.

1. *Ixora goalparensis* Bremek. (1938 : 336) was postulated on the basis of *U.N. Kanjilal 5758*, collected from Goalpara district of Assam. This was distinguished from *I. subsessilis* in much longer calyx teeth. *I. longibracteata* Bremek. (1959: 371) was distinguished from *I. goalparensis* Bremek. in longer bracts, bracteoles and calyx teeth. A study of the protologue and type specimens along with other specimens of both the species suggests that *I. goalparensis* and *I. longibracteata* differ neither from each other nor from *I. subsessilis* in any respect. The latter is variable in the length of bracts, bracteoles, calyx teeth and corolla tube, thereby covering up the distinctions noted by Bremekamp (loc.cit.). Hence *I. goalparensis* and *I. longibracteata* are treated as synonyms as follows. They do not even deserve any infraspecific status.

*Ixora subsessilis* Wall. ex G. Don, Gen. Syst. 3: 572. 1834 (Lectotype : Jaintiapore (Jowai), May 1826, *F. De Silva s.n.* ex Wall. Cat. 6139 A CAL!). Hook. f., Fl. Brit. Ind. 3: 139. 1880; Husain & Paul in Journ. Econ. Taxon. Bot. Addl. Ser. 6: 119. 1989.

*I. oxyphylla* Wall. ex G. Don, Gen. Syst. 3: 572. 1834 (Type: *Wall. Cat.* 6159 & 6159 A CAL!)

*I. goalparensis* Bremek. in Journ. Bot. 76: 336. 1938; Husain & Paul in Journ. Econ. Taxon. Bot. Addl. Ser. 6: 117. 1989 (Type : Assam, Goalpara dist., Guma Reserve, 22. 5. 1916, *U.N. Kanjilal 5758* holo. DD!, photo and iso. CAL!), SYN. NOV.

*I. longibracteata* Bremek. in Ind. For. 85(7): 371. 1959; Hussain & Paul in Journ. Econ. Taxon. Bot. Addl. Ser. 6: 119. 1989 (Type: Bangladesh, Chittagong. Hill Tracts, Tintilla, 16.5.1939, *T. V. Dent 14*, holo. DD!, photo CAL! Syn. Nov.

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Husain and Paul (1989 : 119) while selecting *Wall. Cat.* 6139 A CAL as the lectotype misinterpreted *Wall. Cat.* entry and considered that this specimen was collected by *De Silva & W. Gomez*. This is not correct. The specimen concerned in CAL was collected by *F. De Silva* in May 1826 from Sylhet mountain which is in fact Jowai, now in Meghalaya.

2. *Ixora andamanensis* Bremek. (1937b: 260) was described on the basis of *C.E. Parkinson* 140. It was probably wrongly compared with *I. lacei* and *I. ackringae*. Rather it agrees with *I. barbata* Roxb. wherein corolla tube varies in length from 20 to 35 mm and the throat is bearded to glabrescent. In *I. andamanensis*, corolla tube is 15 to 17 mm and the throat is glabrous or glabrescent. Thus it gets merged with *I. barbata* and does not deserve any infra-specific status.

*I. katchalensis* Husain & Paul (1984 : 153 - 156) was postulated on the basis of four gatherings : *P. Chakraborty* 1134 & 5305, *N. Bhargava* 5031 and *N. P. Balakrishnan* 5325. It was distinguished from *I. barbata* Roxb. in "distinctly longer petiole, more lateral nerves, different inflorescence pattern, number of flowers per head and structure of stigma". A study of protologue along with the types (holo. and iso.) suggests that, *I. katchalensis* does not differ from *I. barbata* in any respect and agrees with it. The stigma described as "slightly cleft in the middle by 1/3 from above" is found to be bifurcated to two linear stigmatic arms. Hence, *I. katchalensis* does not stand as a distinct species, or does not deserve any infraspecific status.

*I. andamanensis* and *I. katchalensis* are reduced here to synonyms as follows.

*Ixora barbata* Roxb. (*Hort. Beng.* 10. 1814 non. nud. &) ex *Smith* in *Rees, Cycl.* 19. no. 6. 1811; *Roxb. Fl. Ind.* 1: 394. 1820 (Type: Andaman Islands. Cultivated at H.B.C. (CAL), *Roxburgh s.n.* holo. K!, photo CAL!); *Hook.f., Fl. Brit. Ind.* 3: 148. 1880; *Hussain & Paul* in *Journ. Econ. Taxon. Bot. Addl. Ser.* 6: 146. 1989.

*I. andamanensis* Bremek. in *Journ. Bot.* 75: 260. 1937; *Husain & Paul* in *Journ. Econ. Taxon. Bot. Addl. Ser.* 6: 94. 1989 (Type: Andaman Is-

land, Havelock, 1914, *C.E. Parkinson* 140 holo. DD!, photo CAL!), *Syn. Nov.*

*I. katchalensis* Husain & Paul in *Blumea* 30: 153-156. 1984 & *Journ. Econ. Taxon. Bot. Addl. Ser.* 6: 153. 1989 (Type: India, Andaman & Nicobar Island, North Nicobars, Katchal Is., sea level, 22 Apr. 1974, *P. Chakraborty* 1134 PBL), *Syn. Nov.*

3. *Husain & Paul* (1986, 1989) proposed *I. beddomei*, *I. manantoddi* and *I. mercaraica*, on the basis of a single gathering each, collected from the same locality in Wynaad district of Kerala, and the adjacent locality Mercara of Coorg, now in Karnataka. They distinguished these species from *I. lawsonii*, which was also originally collected from these localities.

*Husain and Paul* do not appear to have examined the type specimen of *I. lawsonii* located at K and MH as no sign of exclamation is added after the name of herbaria where they are extant nor they seem to have studied the original description properly. In describing this species they say "habit unknown... stipules not seen... anthers and filaments not seen". In 'distribution and ecology' they say "populations are usually encountered in ghats of Wynaad, Manantodde and Coorg", but no specimens has been cited. If populations are encountered then the habit and stipules cannot remain unknown. The notes on the species on p. 133 are ad verbatim copied from *Gamble's* original publication.

*Gamble* stated inter alia "Arbor vel frutex elatus ... Folia ..... basi rotundata, juniore aliquando attenuata; nervi lateralis.....10-16; stipules ovatae, apiculo dorsali longi subulata ..... stamina recurva, filamentis brevibus, antheris linearibus". This appears to be a rare species. In spite of the area having been thoroughly explored, only one collection has been made after the original collection.

These species differ from *I. lawsonii* only in slight pubescence of the leaf, a character that may arise due to ecological variation. Moreover for this slight variation in hairiness only, these taxa cannot be distinguished even in infraspecific status.

*Ixora beddomei* is distinguished from *I. lawsonii* in foliis basi acutis, calycum tubis pubescentibus et corollae tubis 17-17.5 mm longis. In *I. lawsonii*, leaf base varies from acute to obtuse or rounded. The calyx is pubescent in the same specimen (*Wight s.n.* K!) and corolla tube is 7-20 mm long, smaller size is evident in bud stage. Thus *I. beddomei* cannot stand as a distinct species.

Type specimens of *I. mercaraica* (*Hohenacker* 439 a) is too poor to be the basis of a species. It is an incomplete specimen with only a pair of leaves at the base of peduncle, which is normally variable from those of the other leaves in form, length of the petiole and hairiness. The peduncle may be pubescent when the remaining part of the stem is glabrous. In *I. lawsonii*, petiole varies from 2 to 10 mm. Calyx tube pubescent outside, calyx teeth 3-7.5 x 0.5-1.0 mm, pubescent outside, glabrous within. Moreover, a species should not be distinguished on the basis of slight differences in quantitative characters like length of petiole, bracteoles and calyx lobes. Thus *I. mercaraica* also does not stand.

*I. manantoddi* agrees with *I. lawsonii* in all respects, except hairiness of young branches and leaves beneath. So it does not stand as a distinct species.

*I. beddomei*, *I. mercaraica* and *I. manantoddi* are reduced to synonyms as follows:

*Ixora lawsonii* Gamble in Kew Bull. 1920: 247. 1920; Husain & Paul in Journ. Econ. Taxon. Bot. Addl. Ser. 6: 131. 1989 (Type: Kerala, Wynaad dist., Manantodde, ± 1000 m, Jan. 1884, *M.A. Lawson* 43 lecto. K!, photo CAL!, Isolecto. MH!).

*I. beddomei* Husain & Paul in Candollea 41 (1): 87. 1986 & Journ. Econ. Taxon. Bot. Addl. Ser. 6: 124. 1989 (Type: Kerala, Wynaad, 1885, *R.H. Beddome* 3909 holo. BM!, photo CAL!, iso. K), Syn. Nov.

*I. mercaraica* Husain & Paul in Candollea 41(1): 88. 1986 & Journ. Econ. Taxon. Bot. Addl. Ser. 6: 135. 1989 (Type: Karnataka, Mercara, 1847, *Hohenacker* 439 a, holo. BM!, photo CAL!, iso. K), Syn. Nov.

*I. manantoddi* Husain & Paul in Pl. Syst. Evol. (MSS) & in Journ. Econ. Taxon. Bot. Addl. Ser. 6: 133. 1989 (Type: Kerala, Wynaad, Manantodde, *R.H. Beddome* 3908, holo. BM! photo CAL!, iso. K), Syn. Nov.

4. *Ixora capituliflora* Bremek. (1937 b) was based on *C.E. Parkinson* 1198 and *J.H. Lace* 2818 from Andaman Islands. The author distinguished this species from three distantly related species: *I. merguensis* Hook.f. in calyx lobes longer, glabrous, corolla not bearded; from *I. korthalsiana* Kurz in corolla not bearded and from *I. kurziana* (Teysm. & Binn.) Kurz in leaves smaller, inflorescence subcapitate, calyx lobes longer. On examination of types and other collections from Andaman Islands, it is observed that this species is not distinguishable from *I. finlaysoniana* Wall. ex G. Don. The leaves of *I. finlaysoniana* are narrowly obovate or oblanceolate, obtuse or mucronulate at apex, attenuate at base, whereas in Andaman specimens (*I. capituliflora*), it is variable from elliptic to -oblong, -obovate or -lanceolate. The cyme is also variable, subcapitate to distinctly branched corymbose one. So, *I. capituliflora* Bremek. does not stand as a distinct species and is reduced to a synonym as follows. It does not even deserve any infraspecific status.

*Ixora finlaysoniana* Wall. ex G. Don, Gen. Syst. 3: 572. 1834 (Type: East India, *Finlayson s.n.* ex Wall. Cat. 6166 K-WH microfiche CAL!).

*I. capituliflora* Bremek. in Journ. Bot. 75: 297. 1937; Husain & Paul in Journ. Econ. Taxon. Bot. Addl. Ser. 6: 124. 1989 (Type: Andaman Islands, 1916, *C.E. Parkinson* 1198, holo. & iso. DD!, photo & iso. CAL!), Syn. Nov.

5. *Ixora roxburghii* Balakr. (1981 : 232) was proposed as a substitute name for *I. villosa* Roxb. (1814 & 1820) as the latter was a later homonym of that of Poiret (1813), which represents a synonym of *Pavetta villosa* Vahl. The name *I. roxburghii* Balakr. was accepted by Husain and Paul (1989 : 102). However, they overlooked that *I. roxburghii* Balakr. is also a later homonym of that of O. Kuntze (1891), which represents a synonym of *Pavetta tomentosa* Roxb. ex Smith. So, this name is rejected as per Art. 64 of Interna-

tional Code of Botanical Nomenclature. Consequently a substitute name is proposed as follows:

*Ixora balakrishnii* Deb et Rout, *nom. nov.*

*Ixora villosa* Roxb. (Hort. Beng. 10. 1814, *nom. nud.* &) Fl. Ind. 1: 382. 1820, *non* Poir. 1813

(Type: Sylhet, *Roxburgh s.n.* ex Wall. Cat. 6137 A, CAL!, K); Hook.f., Fl. Brit. Ind. 3: 144. 1880.

*I. roxburghii* Balakr. Fl. Jowai 1: 232. 1981, *non* O. Kuntze 1891; Husain & Paul in Journ. Econ. Taxon. Bot. Addl. Ser. 6: 102. 1989.

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